
JOINT USERS RESOURCE ALLOCATION PLANNING
(JURAP) MEETING
JULY 19, 2001

Jet Propulsion Laboratory
California Institute of Technology

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August 20, 2001
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FROM: Eugene S. Burke

SUBJECT: Minutes for the Joint Users Resource Allocation Planning Committee Meeting held July 19, 2001.

NEXT JURAP MEETING:

Thursday, September 20, 2001
Bldg. 303, Room 411
1:00 p.m.

Attendees:

C. Abramo	D. Doody	K.Kim	R. Ryan
H. Alexander	R. Dutilly	N. Lacey	M. Slade
V. Altunin	J. Hall	A. Landon	J. Valencia
R. Bartoo	S. Hearn	N. Lopez	I.J. Webb
A. Chang	J. Hodder	K. Martinez	
B. Compton	P. Khoury	D. Morris	

The Joint Users Resource Allocation Planning (JURAP) Committee meets monthly to review the status of Flight Projects, to identify future requirements and outstanding conflicts, and the requirements of other resource users. The last regular meeting was held July 19, 2001 at the Jet Propulsion Laboratory.

Introductory Remarks - E. Burke

David Morris chaired the meeting on July 19, in Gene Burke's absence. The JURAP committee will not meet in August due to the scheduled August 14 Resource Allocation Review Board Meeting. Construction on the new Beam Waveguide Antenna at Madrid (DSS-55) is on schedule. The DSS-63 Downtime Readiness Review committee met on Thursday July 12, 2001 and determined that the 70m X-band Uplink task scheduled to begin July 23rd at DSS-63 is not ready for implementation, citing a number of concerns.

A certified lifting structure, a modification kit that provides power to the cone assembly, and Low Noise Amplifier equipment are needed at Madrid before DSS-63 can start the scheduled downtime. The required equipment is in transit to Madrid and the general consenses is that the planned downtime at DSS-63 will proceed as scheduled. The Downtime Readiness Review committee will meet again on Friday July 20th to evaluate the situation. MAP successfully launched on May 30, 2001. The GOES launch scheduled for July 22nd slipped by 24 hours because of poor weather, and the GENESIS spacecraft is scheduled for launch July 30, 2001.

SPECIAL REPORT

Polar Maneuver Scheme – R. Dutilly (GSFC)

Robert Dutilly, the POLAR Project Manager, gave an informative presentation on the POLAR mission orbit, and the spacecraft attitude design. Sun-angle constraints require semi-annual precession of the spacecraft's spin-axis (flip) via propulsive maneuvers. Spacecraft spin-axis is precessed 180 degrees to maintain orientation along the orbit normal/anti-normal line. Complicating this need to flip the spacecraft is the semi-annual eclipse season. This maneuver will be done in three 2- to 3-hour segments to avoid the eclipse season. During the eclipse's shadow periods, batteries will provide the power needed to maintain normal operations.

Mr. Dutilly reported that this year the POLAR spacecraft would encounter the most severe autumn eclipse season to date, between September 17 and October 2. During this period, the spacecraft will enter shadows lasting up to 157 minutes. The battery depth-of-discharge for a 157-minute shadow is predicted to be 43% and it will require approximately 7 hours to recharge the batteries after the spacecraft exits the shadow. To minimize the risk to the spacecraft and to the mission during this critical three-week autumn eclipse period, POLAR mission operations will turn off all science instruments except one. To prepare for the eclipse season, mission operations will begin battery-reconditioning operations on July 23, 2001. All autumn eclipse events have been scheduled and are conflict-free. No additional DSN resources are requested at this time.

Resource Analysis Team - K. Kim (for F. Leppla)

Week 37 was released to the DSN on July 13, 2001, and Week 38 is due for release July 23, 2001. Weeks 52-04 will enter the negotiation process in September.

DSS Downtime Forecast – J. Valencia

The scheduled Downtime for NSP implementation at DSS-15 has been moved from August 2002 to April 2003, and is now NIB to the DSS-15 antenna controller replacement task. The scheduled installation of the 20kW transmitter at DSS-54, planned for October 2002, cannot be met. The task team has requested the Resource Allocation and Planning group to reschedule the downtime until after April 15, 2003 with a task duration of approximately 40 days.

DSN Operations – J. Hodder

DSN performance is normal during this reporting period.

Goldstone Solar System Radar - M. Slade

Two radar observations of Mercury's North Pole were successfully supported by Goldstone in June and July, of 2001. In support of the Mars Exploration Rover landing site, radar interferometry tracks were successfully supported by DSS-14, DSS-13, DSS-25, and the 34m Goldstone Apple Valley Radio Telescope in July 2001.

Radio Astronomy / Special Activities - G. Martinez

Two Time-and-Earth-Motion Precision Observations (TEMPO) and two Cat M & E observations were successfully supported in June 2001 with 94% and 99% of data time utilized. In support of the Space Geodesy Program, two Continuous Observations of the Rotation of the Earth (CORE) were supported at DSS-65 with 99% of data time utilized. In addition, Mr. Martinez reported that the next two Cat M&E supports, which are scheduled for July 28 and November 10, are 115 days apart. The requirement is for two Cat M&E supports every 6 weeks. George is concerned that the Project requirement is not being met.

FLIGHT PROJECTS REPORTS

Genesis (pre-launch status) – N. Lopez

The Genesis spacecraft is in good health and is ready for transport to the launch pad for a July 30, 2001 liftoff. The launch from the Kennedy Space Center can be viewed on the Genesis website.

Ulysses – I.J. Webb

Spacecraft operations are normal. The spacecraft is in its second orbit around the sun and is currently in nutation operations with instrument calibrations and reconfigurations performed as required. SOLACE maneuvers were successfully executed on DOY 172 and DOY 199. DSS-63 experienced a command abort on DOY 187. Station operations swapped to a backup command system to clear the problem.

Galileo – B. Compton

The spacecraft has exited solar conjunction. Orbit Trajectory Maneuver–97 (OTM) was successfully executed and calibration of the Near Infrared Mapping Spectrometer instrument was performed. Data playback of the Callisto encounter is scheduled. The next significant event is the IO encounter planned for August 6, 2001

Deep Space 1 (DS1) – K. Moyd

On July 18, 2001 the spacecraft lost lock on the designated tracking star, and locked to and tracked a background star for about 15 hours. An additional track was scheduled and the data collected was used in determining the actual spacecraft pointing. Beginning September 15, 2001, the spacecraft will be re-oriented toward Earth with occasional pointing to Borrelly for observations. The comet Borrelly encounter is planned for September 22, 2001, and the encounter event will work around the unavailability of DSS-63. Post-Encounter, the DS1 mission is funded for approximately 6 weeks to analyze the ion engine state after three years of use.

MAP – A. Landon

MAP successfully launched on June 30, 2001. Following launch and separation, the spacecraft executed three phasing loops for a Lunar Flyby on July 30th. A midcourse correction maneuver is planned for August 6, which will take the spacecraft to the LaGrange (L2) parking orbit. MAP is scheduled to arrive at the L2 point approximately 90 days after launch.

Stardust - R. Ryan

The spacecraft is in nomial cruise and operations are nominal. The spacecraft is configured on the high gain antenna (HGA) with a downlink data rate of 504 bits-per-second. Presently, Stardust is 1.70 astronomical units (AU) from Earth, with a round-trip light time (RTLT) of 28 minutes and 20 seconds. DSN support has been good during this reporting period.

Voyager – I. J. Hall

Voyager 1 and Voyager 2 operational status is nominal and overall DSN support is good. Voyager 1 heliocentric distance is 81.7 AU with a RTLT of approximately 22 hours and 30 minutes. Voyager 2 heliocentric distance is 64.5 AU with a RTLT of approximately 17 hours and 39 minutes.

Cassini - D. Doody

Cassini operations are essentially nominal. Minor spacecraft instrument anomalies and recoveries were worked in near-real-time, as required. The Quiet Cruise Sub-phase is ongoing, and will continue through July 8, 2002. Cassini captured the first images of Saturn on DOY 194. A RSS Ka translator lock anomaly is under investigation. Test No. 2 of the Gravitational Wave Experiment (GWE) system is planned for September, and the first GWE is planned for November 2001.

Mars Mission Management Office (MMO) - E. Brower

No oral report – viewgraphs included in web document.

U.S. Space VLBI – V. Altunin

The HALCA spacecraft health is good and the mission will continue beyond the February 2002 end-of-mission support date. The Project has requested DSN support be extended until September 2002.

The next JURAP meeting will be held:

Thursday, September 20, 2001,
in Bldg. 303, Room 411,
at 1:00 p.m.

Teleconferencing is available by calling (818) 354-2626 during the scheduled meeting time.

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POLAR Flip Maneuver and Eclipse Profiles

Presented by Bob Dutilly, NASA Goddard Space Flight Center
July 19, 2001 JURAP

Material prepared at NASA/GSFC
by
Steve Hearn, POLAR Spacecraft Engineer
Heather Franz, WIND Flight Dynamics Analyst
Joyce Milasuk-Ross, POLAR Mission Planner

http://www-spof.gsfc.nasa.gov/istp/polar/

POLAR Science Objectives

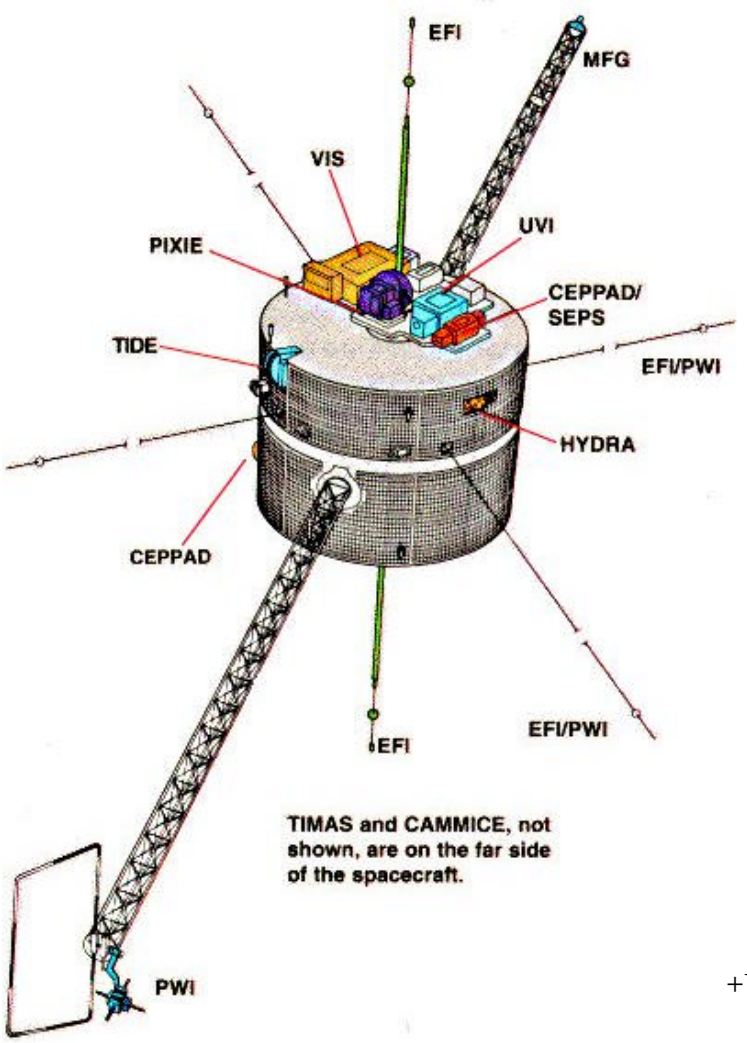
- Measure the energy, mass, and momentum flow and their time variability throughout the solar wind-magnetosphere-ionosphere system that comprises the geospace environment

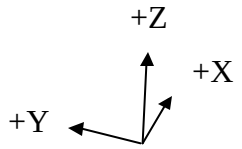
- Improve the understanding of plasma processes that control the collective behavior of various components of geospace and trace their cause and effect relationships throughout the system

- Assess the importance to the terrestrial environment of variations in energy input to the atmosphere from geospace plasma processes

POLAR Observatory

+Z axis





POLAR Orbit and Attitude Design

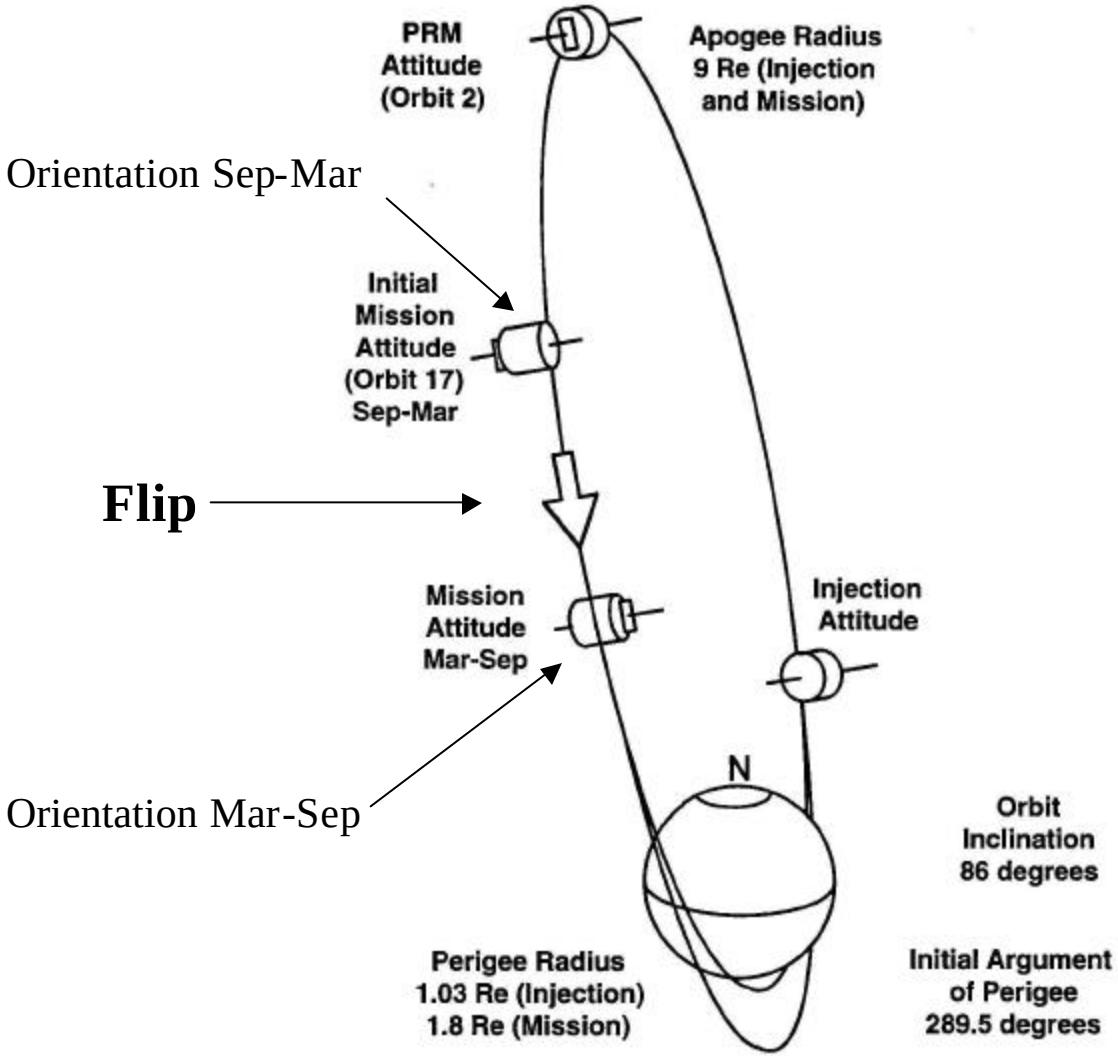
• Highly elliptical 18 hour earth orbit with perigee at 1.8 R_E and apogee at 9 R_E

• Spacecraft spin-axis is oriented along orbit-normal vector, causing seasonal changes in sun-angle with respect to spin-axis

• Sun-angle constraints require the semi-annual precession of the spacecraft spin-axis (flip) via propulsive maneuvers

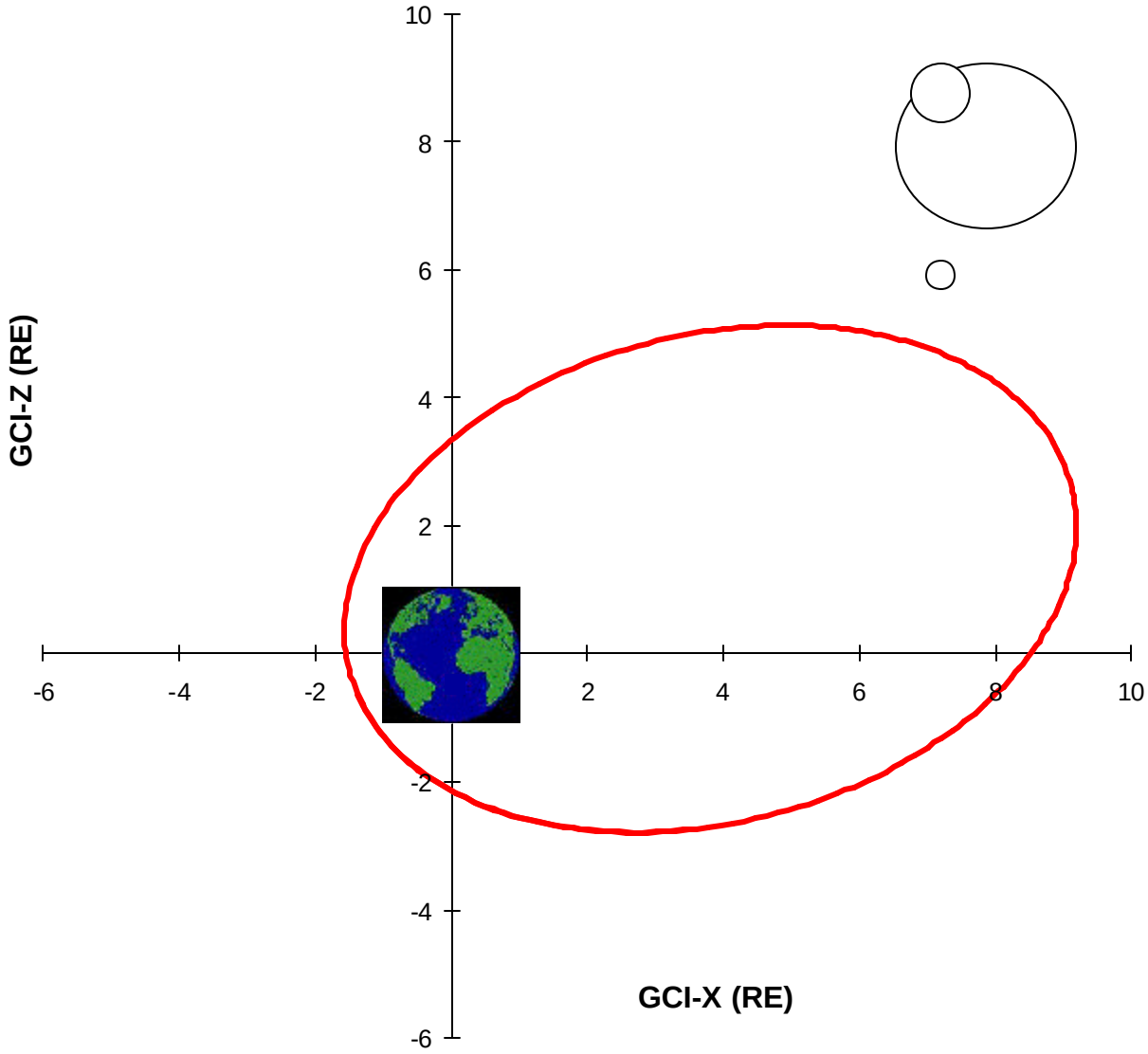
• Spacecraft spin-axis is precessed 180° to maintain orientation along orbit normal/anti-normal line

POLAR Orbit and Attitude



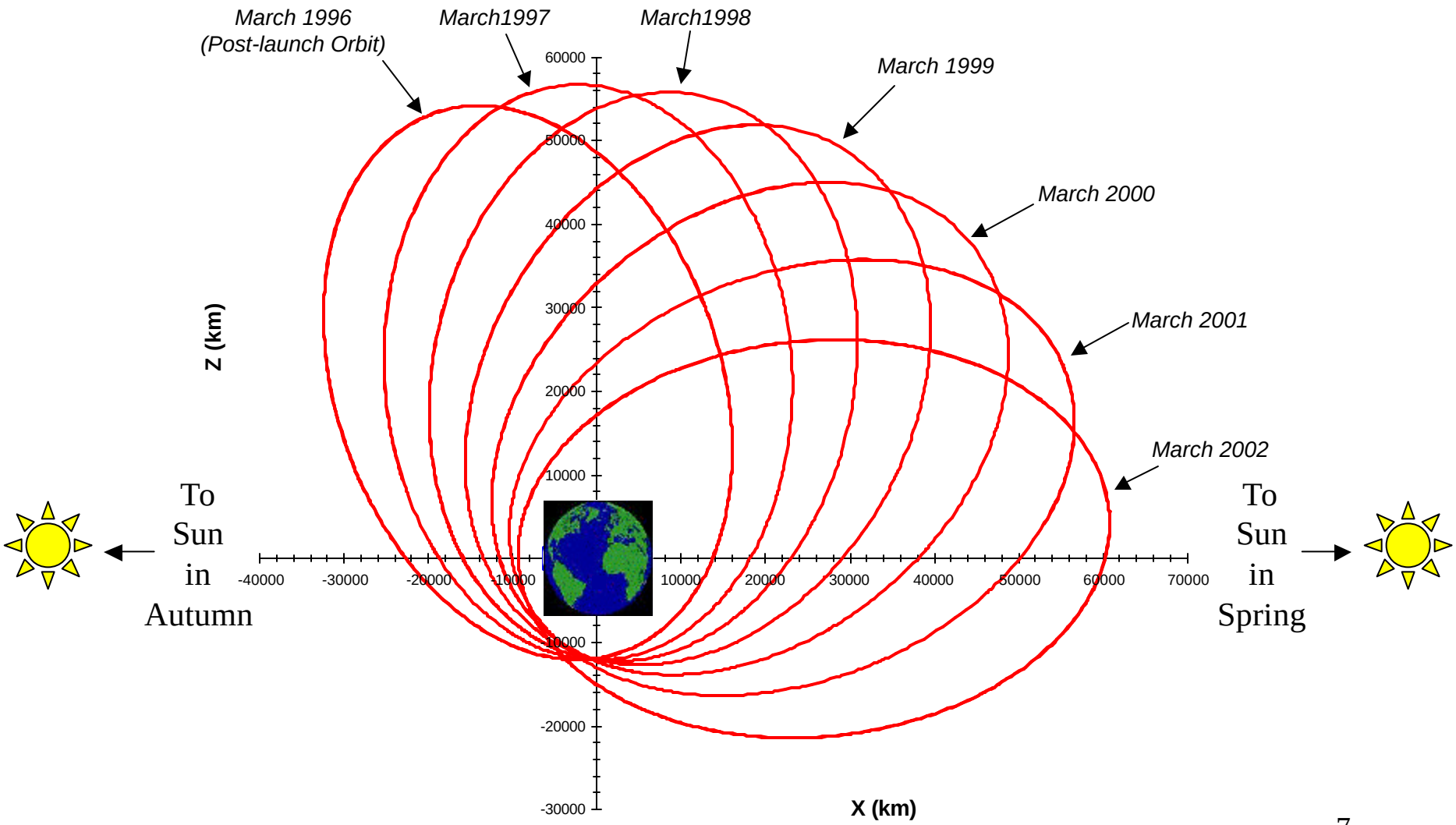
POLAR's Current Orbit

(Earth-centered Mean-of-J2000 Earth Equator Coordinates)



Precession of POLAR's Orbit Plane

(Earth-centered Mean-of-J2000 Earth Equator Coordinates)



POLAR Attitude Requirements

• POLAR is designed not to permit solar radiation to directly impinge on the spacecraft +Z (top) face, location of the Despun Platform and imaging instruments

• Spacecraft batteries at risk for overheating

• Communications subsystem Power Amplifiers at risk for overheating

POLAR Semi-annual Maneuvers

• Spin-axis precession always occurs during semi-annual eclipse seasons

• Pre-maneuver payload reconfiguration takes approximately one week to perform - optical imagers must be sun-safe

• Sufficient fuel remains on-board to perform semi-annual maneuvers through 2003

•Spacecraft will transition to ecliptic-normal attitude when insufficient fuel remains for semi-annual flip maneuvers

•Proposal to start half flips in the spring of 2002

POLAR Semi-annual Maneuvers (continued)

• POLAR successfully completed its 11th flip maneuver April 1, 2001

• Flip number 12 is scheduled for September 15 - 16 and October 1, 2001, with post-flip trim maneuvers on October 3rd

•This maneuver will be done in three 2- to 3-hour segments to avoid the eclipse season:

- Spin-axis precession will be accomplished in three major segments of approximately 60° each of the 180° total precession
- Segments 1 and 2 on September 15 - 16 will place Polar in a Sun-safe attitude for the eclipse season
- Segment 3 on October 1 will complete the 180° precession

POLAR Semi-annual Maneuvers (continued)

• Sufficient ranging data are required for definitive orbit determination following the three maneuver segments

• Two additional maneuvers are required to trim the spacecraft attitude and main body spin rate, nominally 10 r.p.m.

• Each trim maneuver takes approximately 15 minutes to complete

• Post-maneuver payload reconfiguration takes up to two weeks to complete - optical imagers must be sun-safe

POLAR Eclipse Season

• Spacecraft experiences annual spring and autumn eclipse seasons

• Three spacecraft batteries provide sufficient power to maintain normal operations throughout each shadow; all instruments, except the MFE instrument, will be powered down or turned off during this eclipse season

• All three spacecraft batteries remain in excellent health

• The DOD estimated will be 35% to 40%

• During eclipse seasons, one shadow is experienced per 18 hour orbit

POLAR Eclipse Season (continued)

• Maximum eclipse duration for autumn season is increasing rapidly every year due to orbit precession as apogee moves toward lower latitudes

• Maximum eclipse duration for spring season is decreasing every year due to orbit precession

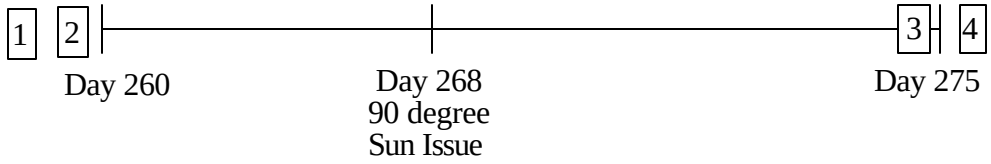
• Orbit apsidal precession rate is approximately 16° per year

• This eclipse season will be the most severe to date and this is why the mission had to take these actions

•The longest shadow period this time will be 157 minutes

POLAR Eclipse Season (continued)

POLAR Eclipse Season Timeline



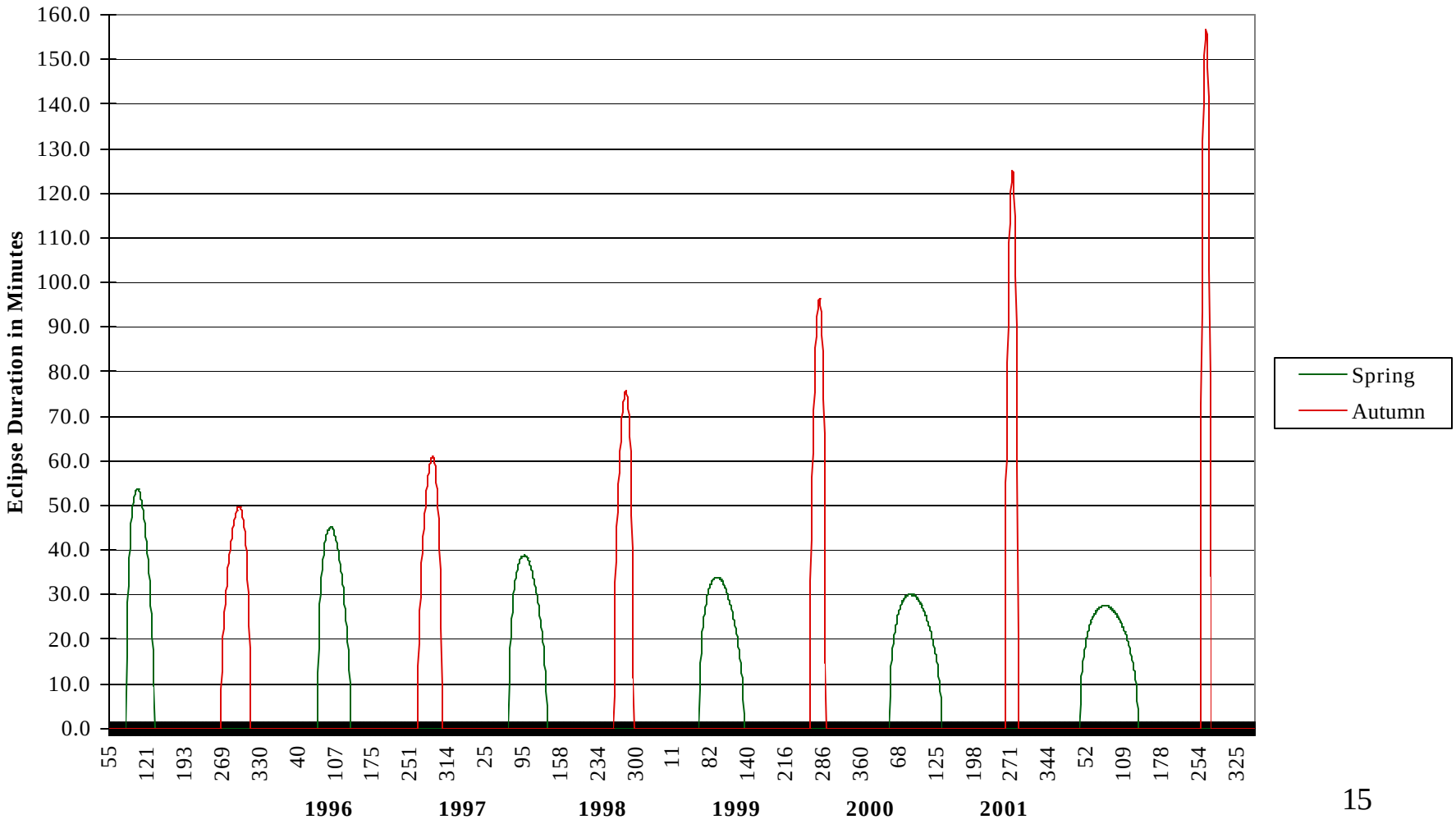
The driver for POLAR is the severe eclipse season which goes from September 17th to October 2nd

1. Maneuver Segment #1 on Day 258 - September 15th
2. Maneuver Segment #2 on Day 259 - September 16th
3. Maneuver Segment #3 on Day 274 - October 1st
4. Trim Maneuver Segment #4 on Day 276 - October 3rd

All instruments except one will be ramped down or turned off during the maneuvers and most importantly during the entire eclipse period due to lack of power. The batteries will be re-conditioned starting July 23rd until the week of August 20th.

POLAR Eclipse Season (continued)

--- POLAR Eclipse Duration Since Launch ---



POLAR Eclipse Season (continued)

• Spacecraft encountered shadows greater than 126 minutes during Autumn 2000 eclipse season

• Spacecraft battery depth-of-discharge for 126-minute shadow was approximately 35%

• Batteries require 5-6 hours to fully recharge from a 126-minute shadow

• Real-time operations during the battery recharge period extends the recharge duration due to power limitations

•Week of July 23rd a battery reconditioning operation will be started. The purpose is to prepare for the eclipse season.

POLAR Eclipse Season (continued)

• Spacecraft will encounter shadows of up to 157 minutes during Autumn 2001 eclipse season

• Spacecraft battery depth-of-discharge for 157-minute shadow predicted to be 43%

• Batteries expected to require 7 hours to fully recharge from a 157-minute shadow

• Autumn eclipse season begins September 17th and ends October 2nd

Conclusion

• Schedule of Events for Flip number 12 and Autumn Eclipse Season are conflict free

• No additional resources are required at present

• Due to criticality of the Flip Maneuver along with the severity of this Autumn Eclipse Season, scheduling flexibility is significantly reduced during this time frame

• We appreciate the understanding of the DSN community in helping us successfully complete this critical three-week phase in our mission

JOINT USERS RESOURCE ALLOCATION PLANNING COMMITTEE

Resource Analysis Team

July 19, 2001

Kevin Kim

(for Frank Leppla)

DSN User / Mission Planning Set
2001 - 2011

ONGOING/PLANNED PROJECTS				
Project	**Acronym**	**Launch or Start**	**EOPM**	**EOEM**
DSN VLBI Clock Sync and Catalog M&E	DSN	--	--	--
DSS Maintenance	DSS	--	--	--
European VLBI Network	EVN	--	--	--
Ground Based Radio Astronomy	GBRA	--	--	--
Space Geodesy	SGP	--	--	--
Voyager 2	VGR2	08/20/77	10/15/89	12/31/19
Voyager 1	VGR1	09/05/77	12/31/80	12/31/19
Goldstone Solar System Radar	GSSR	04/01/85	--	--
Galileo	GLLO	10/18/89	12/07/97	09/21/03
Ulysses	ULYS	10/06/90	09/11/95	12/31/04
ISTP - Geotail	GTL	07/24/92	07/24/95	09/30/05
ISTP - Wind	WIND	11/01/94	11/01/97	09/30/05
Space VLBI	SVLB	02/01/95	12/31/03	- - -
ISTP - SOHO	SOHO	12/02/95	05/02/98	12/30/05
ISTP - Polar	POLR	02/22/96	08/23/97	09/30/05
Gravity Probe B	GPB	06/01/96	10/31/03	TBD
Mars Global Surveyor	MGS	11/07/96	02/01/01	06/01/04
Highly Advanced Laboratory for Communications and Astronomy	VSOP	02/12/97	09/30/01	- - -
Advance Composition Explorer	ACE	08/25/97	02/01/01	01/31/05
Cassini	CAS	10/15/97	06/30/08	06/30/10
NOZOMI (Planet-B)	NOZO	07/03/98	12/31/05	TBD
Deep Space 1	DS1	10/24/98	09/19/99	12/06/01
Stardust	SDU	02/07/99	01/14/06	- - -
Chandra X-ray Observatory	CHDR	07/23/99	07/23/04	07/23/09
Imager for Magnetopause-to-Aurora Global Exploration	IMAG	03/25/00	05/30/02	05/30/04
Cluster 2 - S/C #2 (Samba)	CLU2	07/16/00	02/15/03	09/19/05
Cluster 2 - S/C #3 (Rumba)	CLU3	07/16/00	02/15/03	09/19/05
Cluster 2 - S/C #1 (Salsa)	CLU1	08/09/00	02/15/03	09/19/05
Cluster 2 - S/C #4 (Tango)	CLU4	08/09/00	02/15/03	09/19/05
2001 Mars Odyssey	M01O	04/07/01	08/01/04	09/19/07
Microwave Anisotropy Probe	MAP	06/30/01	10/01/03	10/01/06
Genesis	GNS	07/30/01	09/08/04	- - -
Comet Nucleus Tour (CONTOUR)	CNTR	07/01/02	09/05/08	TBD
Space Infrared Telescope Facility	SRTF	07/15/02	09/14/07	- - -
RadioAstron*	RADA	10/01/02	10/01/07	TBD
International Gamma Ray Astrophysics Lab	INTG	10/17/02	12/18/04	12/18/07
MUSES - C	MUSC	12/14/02	06/05/07	- - -
Rosetta	ROSE	01/13/03	07/10/13	- - -
Mars Express Orbiter	MEX	05/23/03	02/11/06	08/03/08
Mars Exploration Rover - A	MERA	05/30/03	04/06/04	- - -
Mars Exploration Rover - B	MERB	06/27/03	05/10/04	- - -

* Planning dates

DSN User / Mission Planning Set

2001 - 2011

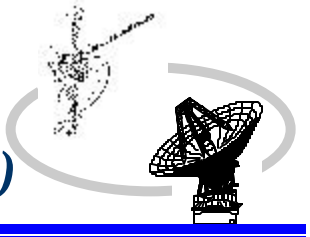
ADVANCED PLANNING PROJECTS				
Project	**Acronym**	**Launch or Start**	**EOPM**	**EOEM**
Lunar - A	LUNA	08/09/03	03/03/04	- - -
Deep Impact	DEEP	01/02/04	08/05/05	- - -
Messenger	MSGR	03/10/04	04/06/10	- - -
Mars Reconnaissance Orbiter	MRO	08/08/05	12/31/10	
Stereo Ahead	STA	11/12/05	02/18/08	02/18/11
Stereo Behind	STB	11/12/05	02/18/08	02/18/11
StarLight	SL	06/06/06	11/30/06	- - -
Mars Smart Lander 2007	M07L	09/04/07	08/19/10	TBD
Mars Competed Scout 2007	M07S	09/04/07	11/19/08	TBD
Mars CNES Orbiter 2007	M07O	09/09/07	08/11/08	08/12/10
Mars ASI/NASA Telecommunications Orbiter 2007	M07T	09/09/07	08/09/18	TBD
ARISE	ARSE	01/01/08	01/01/13	- - -
Highly Advanced Laboratory for Communications and Astronomy	VSP2	01/01/08	01/01/13	- - -
Europa Orbiter	EURO	03/15/08	03/10/12	TBD
Mars ASI/NASA Science Orbiter 2009	M09O	10/04/09	08/29/12	TBD
Mars CNES MSR Lander 2011	M11L	10/30/11	09/10/14	TBD
Mars CNES MSR Orbiter 2011	M11O	10/30/11	07/22/14	TBD

TMOD Resource Implementation Planning Matrix

Station	Subnet	First Delivery Date	S-Band Down	S-Band Up	X-Band Down	X-Band Up	Ka-Band Down	Ka-Band Up	Ku-Band Up and Down	
DSS-14	70M	XXXX	XXXX	XXXX	XXXX	XXXX	TBD	N/A	N/A	
DSS-15	34HEF	XXXX	XXXX	N/A	XXXX	XXXX	TBD	N/A	N/A	
DSS-16	26M	XXXX	XXXX	XXXX	N/A	N/A	N/A	N/A	N/A	
DSS-24	34B1	XXXX	XXXX	XXXX	XXXX	5/1/2003	10/1/2005	N/A	N/A	
DSS-25	34B2	XXXX	N/A	N/A	XXXX	XXXX	XXXX	5/1/2001	N/A	
DSS-26	34B2	4/2/2003	4/2/2003	N/A	4/2/2003	4/2/2003	4/2/2003	N/A	N/A	
DSS-27	34HSB	XXXX	XXXX	XXXX	N/A	N/A	N/A	N/A	N/A	
DSS-28	34B2	TBD	N/A	N/A	TBD	TBD	N/A	N/A	N/A	
DSS-33	11M	XXXX	N/A	N/A	XXXX	XXXX	N/A	N/A	XXXX	
DSS-34	34B1	XXXX	XXXX	XXXX	XXXX	XXXX	1/1/2005	N/A	N/A	
DSS-43	70M	XXXX	XXXX	XXXX	XXXX	XXXX	TBD	N/A	N/A	
DSS-45	34HEF	XXXX	XXXX	N/A	XXXX	XXXX	TBD	N/A	N/A	
DSS-46	26M	XXXX	XXXX	XXXX	N/A	N/A	N/A	N/A	N/A	
DSS-53	11M	XXXX	N/A	N/A	XXXX	XXXX	N/A	N/A	XXXX	
DSS-54	34B1	XXXX	XXXX	XXXX	XXXX	XXXX	8/1/2006	N/A	N/A	
DSS-55	34B2	11/1/2003	N/A	N/A	11/1/2003	11/1/2003	11/1/2003	N/A	N/A	
DSS-63	70M	XXXX	XXXX	XXXX	XXXX	10/11/2001	TBD	N/A	N/A	
DSS-65	34HEF	XXXX	XXXX	N/A	XXXX	XXXX	TBD	N/A	N/A	
DSS-66	26M	XXXX	XXXX	XXXX	N/A	N/A	N/A	N/A	N/A	

* = DSS-26 X-Band Operational Early to cover DSS-15 NSP Downtime, 8/1/02 - 09/27/02.
Will be removed from service 10/1/02 - 4/1/03 for NSP and X/X/Ka Implementation upon return of DSS-15.

XXXX = Capability Currently Exists
N/A = Capability Not Planned



- **RESOURCE NEGOTIATION STATUS**
  - 2001 WEEK 37 (THRU 09/16/2001) WAS RELEASED TO DSN ON 07/13/2001
  - 2001 WEEK 38 (THRU 09/23/2001) IS DUE TO BE RELEASED ON 07/23/2001
  - 2001 WEEKS 52 - 04 (THRU 1/27/2001) WILL GO INTO NEGOTIATIONS STARTING 08/04/2001

- **SPECIAL STUDIES/ACTIVITIES**
  - KEPLER REVISED STUDY

- **ON-GOING ACTIVITIES**
  - MADB/TIGRAS TESTING AND TRAINING
  - DEEP IMPACT LOAD STUDY
  - GALILEO EXTENDED MISSION STUDY
  - GENESIS BACKUP RETURN STUDY
  - IMAGE LOAD STUDY
  - MEX LOAD STUDY
  - MESSENGER LOAD STUDY
  - MRO LOAD STUDY

- **RARB - AUGUST 14, 2001 LINK ON RAPWEB**
  - TIMELINE ADDED

HTTP://RAPWEB.JPL.NASA.GOV

JOINT USERS RESOURCE ALLOCATION PLANNING COMMITTEE

DSS DOWNTIME FORECAST

Jose Valencia

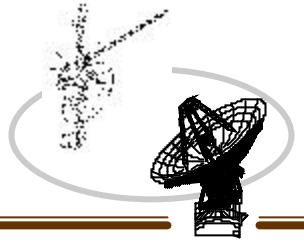
July 19, 2001

NASA Jet Propulsion Laboratory

DSN Downtime & Test Schedule is located on the RAP WWW Homepage at: http://rapweb.jpl.nasa.gov

Although every effort is made to ensure the accuracy of this Downtime Planning report, changes can and do occur. The DSN 7-Day Schedule takes precedence over this document.

Resource Allocation Planning & Scheduling Office (RAPSO)



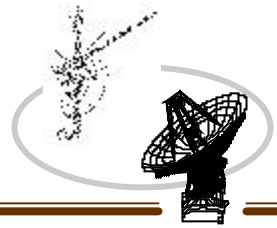
FACILITY	TASK	SCHEDULE	DURATION
DSS-14	Antenna Controller Replacement	Weeks 28 – 40 / 2004	13 Weeks
CANBERRA			
DSS-43	Antenna Controller Replacement	*07/26/04 - 10/03/04 No Proposal (possible in 2005)	10 Weeks
MADRID			
DSS-63	Antenna Controller Replacement	*10/11/04 - 12/19/04 No Proposal (possible in 2005)	10 Weeks
DSS-65	Antenna Controller Replacement	Weeks 07 - 13 / 2004	7 Weeks

*Request Window: Earliest Start - Latest Finish

Antenna Controller Replacement implementation priority:

1. Goldstone
2. Canberra
3. Madrid

One month turn-around between each complex is needed.



MAJOR DSN DOWNTIMES by SITE by Year

The latest update is on:7/17/01 7:45:00 AM
***The highlighted portion indicates the last change made.**

Year	Site	Description	Start	End	Duration (Days)	Weeks	Start DOY	End DOY
2001	DSS 16	Servo Drive Replacement	11/19/01	12/16/01	28	47-50	323	350
2001	DSS 63	70M X-Band Uplink	07/23/01	10/10/01	80	30-41	204	283
2001	DSS 63	NIB - Feedcone Structure	07/23/01	10/10/01	80	30-41	204	283
2001	DSS 63	NIB - Hydrostatic Bearing Regrout	07/23/01	10/10/01	80	30-41	204	283
2001	DSS 63	NIB - Counterweight Rebalance	07/23/01	10/10/01	80	30-41	204	283
2001	DSS 63	NIB - Az Cablewrap Rehab	07/23/01	10/10/01	80	30-41	204	283
2001	DSS 63	NIB - Chiller+HtExch HVAC Mods	07/23/01	10/10/01	80	30-41	204	283
2002	DSS 14	70M Servo Drive Upgrade	07/15/02	09/27/02	75	29-39	196	270
2002	DSS 14	NIB - NSP Implementation	07/15/02	09/27/02	75	29-39	196	270
2002	DSS 24	NSP Implementation	10/01/02	11/22/02	53	40-47	274	326
2002	DSS 24	NIB - 20 KW X-Band Txr Installation	10/01/02	11/22/02	53	40-47	274	326
2002	DSS 24	NIB - KA-Band Encoder Mech Mod-Kit Installation	10/01/02	10/20/02	20	40-42	274	293
2002	DSS 26	NSP Test and Training	10/01/02	02/01/03	124	40-05	274	032
2002	DSS 43	70M Servo Drive Upgrade	11/25/02	02/09/03	77	48-06	329	040
2002	DSS 43	NIB - Ball-Joint Pad Refurbishment	11/25/02	02/09/03	77	48-06	329	040
2002	DSS 43	NIB - NSP Implementation	12/02/02	02/09/03	70	49-06	336	040
2002	DSS 45	NSP Implementation	10/01/02	11/22/02	53	40-47	274	326
2002	DSS 54	NSP Implementation	10/01/02	11/22/02	53	40-47	274	326
2002	DSS 54	NIB - 20 KW X-Band Txr Installation	10/01/02	11/22/02	53	40-47	274	326
2002	DSS 54	NIB - KA Band Encoder Mech Mod Kit Installation	10/01/02	10/20/02	20	40-42	274	293
2002	DSS 65	NSP Implementation	12/02/02	02/09/03	70	49-06	336	040
2002	DSS 66	Servo Hydraulic Drive Replacement	06/24/02	07/21/02	28	26-29	175	202
2003	DSS 15	Antenna Controller Replacement	03/03/03	05/04/03	63	10-18	062	124
2003	DSS 15	NIB - NSP Implementation	04/01/03	05/01/03	31	14-18	091	121
2003	DSS 25	NSP Implementation	02/10/03	04/06/03	56	07-14	041	096
2003	DSS 25	NIB - 20 KW X-Band Txr Installation	02/10/03	04/06/03	56	07-14	041	096
2003	DSS 26	X/X/Ka Downlink Implementation	02/01/03	04/01/03	60	05-14	032	091
2003	DSS 34	NSP Implementation	02/10/03	04/06/03	56	07-14	041	096
2003	DSS 34	NIB - 20 KW X-Band Txr Installation	02/10/03	04/06/03	56	07-14	041	096
2003	DSS 34	NIB - KA-Band Encoder Mech Mod-Kit Installation	02/10/03	03/02/03	21	07-09	041	061
2003	DSS 45	Antenna Controller Replacement	09/08/03	10/25/03	48	37-43	251	298
2003	DSS 46	Servo Hydraulic Drive Replacement	05/05/03	06/01/03	28	19-22	125	152
2003	DSS 63	70M Servo Drive Upgrade	02/10/03	04/20/03	70	07-16	041	110
2003	DSS 63	NIB - Ball-Joint Pad Refurbishment	02/10/03	04/20/03	70	07-16	041	110
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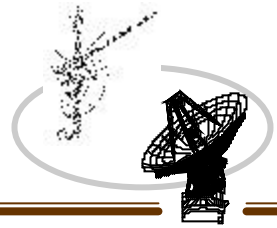

MAJOR DSN DOWNTIMES by DATE

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2003	DSS 63	NIB - NSP Implementation	02/10/03	04/06/03	56	07-14	041	096
2003	DSS 25	NSP Implementation	02/10/03	04/06/03	56	07-14	041	096
2003	DSS 34	NSP Implementation	02/10/03	04/06/03	56	07-14	041	096
2003	DSS 25	NIB - 20 KW X-Band Txr Installation	02/10/03	04/06/03	56	07-14	041	096
2003	DSS 34	NIB - 20 KW X-Band Txr Installation	02/10/03	04/06/03	56	07-14	041	096
2003	DSS 34	NIB - KA-Band Encoder Mech Mod-Kit Installation	02/10/03	03/02/03	21	07-09	041	061
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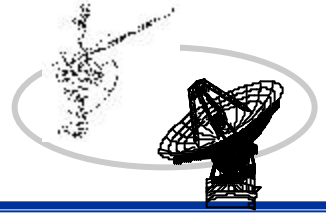
DSN Operations

Jim Hodder

July 19, 2001

NASA Jet Propulsion Laboratory

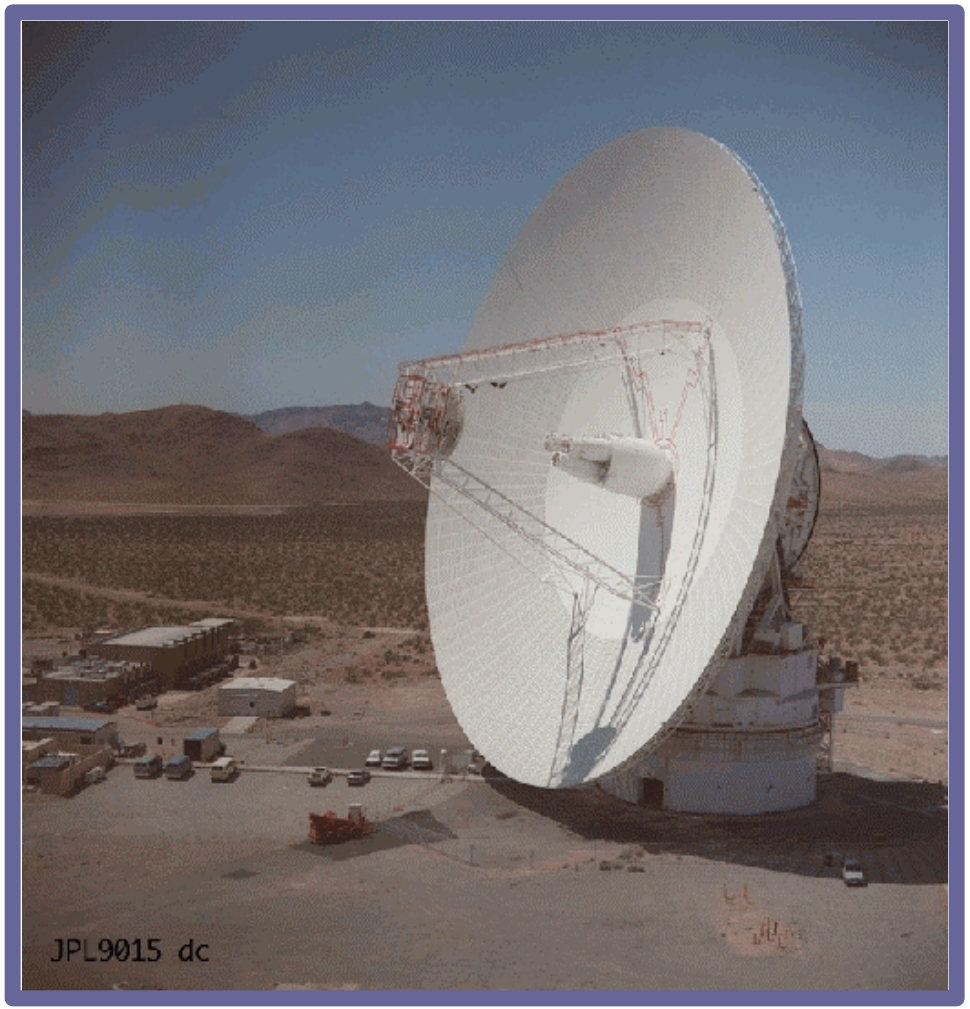
JOINT USERS RESOURCE ALLOCATION PLANNING COMMITTEE



DSN System Availability

Data Type	May 2001	June 2001
Telemetry	99.3%	99.4%
Tracking	98.4%	98.7%
Command	99.4%	99.4%
Monitor	99.4%	99.0%
Radio Science	99.5%	100%
VLBI	98.0%	99.2%

Goldstone Solar System Radar



Martin A. Slade

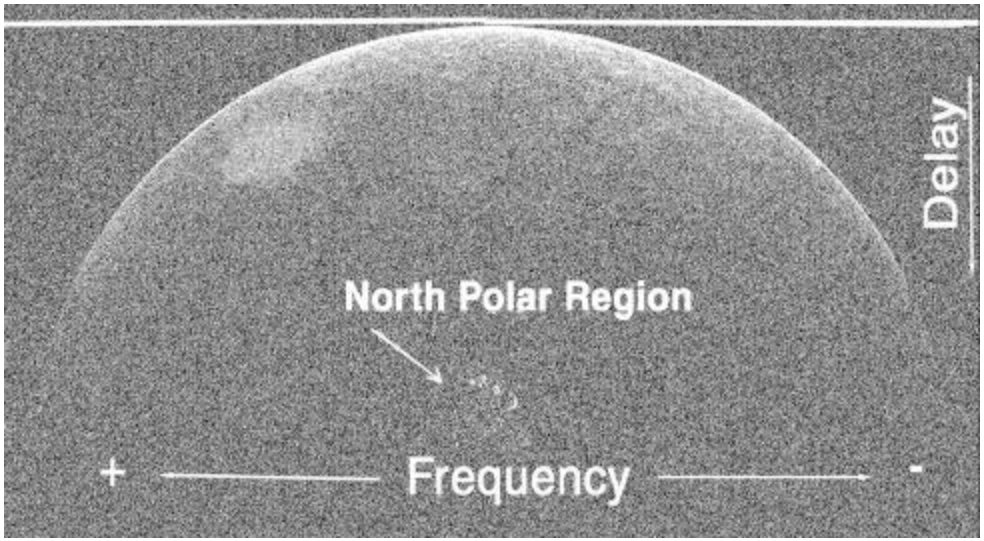
July 19, 2001

NASA Jet Propulsion Laboratory

Joint Users Resource Allocation Planning Committee Meeting

Goldstone Solar System Radar (GSSR)

- **Goldstone radar observations of the North Pole of Mercury were successful on June 29 and July 1, 2001 (see image below). Mercury Relativity tracks on July 7, 8, and 9 were also successful.**



- **The Mars Exploration Rover landing site validation tracks on July 2 and July 14 were successful. These complex tracks involve radar interferometry between DSS-14, DSS-13, DSS-25, and GAVRT.**

Joint Users Resource Allocation Planning Committee

Radio Astronomy and Special Activities

George Martinez

July 19, 2001

TEMPO
(Time and Earth Motion Precision Observations)

- Clock Sync
  - DOY 166
    - No data loss was reported by either DSS-15 or DSS-65.
    - Data tapes sent to the JPL Correlator for processing.
  - DOY 178
    - DSS-15 had a late start due to H/W configuration problems.
    - No data loss was reported by DSS-65.
    - Data tapes sent to the JPL Correlator for processing
  - Metrics
    - 2 observations – 94% of data time utilized.

Cat M & E

- DOY 154
  - No data loss was reported by DSS-15 or DSS-65.
  - Tapes sent to the JPL Correlator for processing.
- DOY 174
  - No data loss was reported by DSS-15.
  - DSS-65 reported problems with the ACS, a tape problem, and the antenna reaching azimuth limits.
  - Tape sent to the JPL Correlator for processing
- Metrics
  - 99% of data time utilized.
- Concern
  - Next Cat M&E experiment is DOY 209/210 (July 28/29) - 1 baseline. The following experiment is scheduled for DOY 314/315 (November 10/11) – 1 baseline. 115 days is too long to go without a Catalog pass. The requirement is for 2 baselines every 6 weeks. Project requirements will not be met.

Space Geodesy Program

- CORE-B201
  - Continuous Observations of the Rotation of the Earth (CORE).
  - DSS-65 reported that antenna azimuth prelimits switch set.
  - Tape sent to the Bonn Correlator for processing.

- Europe 60
  - Europe experiments are designed to determine station coordinates and their evolution in the European geodetic VLBI network with the highest precision possible.
  - No data loss was reported by DSS-65.
  - Tape sent to the Bonn Correlator for processing.

- CORE-B102
  - Continuous Observations of the Rotation of the Earth (CORE).
  - No data loss was reported by DSS-65.
  - Haystack Correlator reports that fringes were found.

- Metrics
  - 3 observations – 99.6% of data time utilized.

Ground Based Radio Astronomy (GBRA)

- GG038C
  - To determine precise image positions of quad gravitational lenses PKS 0411+05 and QSO 1422+231 in order to detect possible proper motions.
  - No data loss was reported either DSS-14 or DSS-63.
  - Data tapes sent to the Socorro correlator for processing.

- GR016C
  - These observations of radio galaxy 3c338 will determine the motion of the components in the jet and counter jet, the plasma velocity and the orientation of the jets with respect to the observer. Furthermore, the distance to 3c338 may be determined.
  - No data loss was reported either DSS-14 or DSS-63.
  - Data tapes sent to the Socorro correlator for processing.

Ground Based Radio Astronomy (GBRA) – contd.

- Radio Stars
  - This is an X-band dual polarization VLBI astrometry experiment to look for candidate stars that may contain extrasolar planets.
  - SPC 10 experienced a commercial power failure.
  - No data outage was reported by DSS-63.
  - Data tapes sent to the Bonn correlator for processing.

- Metrics 3 experiments – 98.9% of data time utilized.

European VLBI Network (EVN)

- **N01X2**
  - **EVN Antenna calibration for X-band.**
  - **DSS-63 reported no data loss.**
  - **Tapes sent to JIVE Correlator for processing.**
  - **Fringes found by the Correlator.**

LAUNCH READINESS STATUS

Nino Lopez

July 19, 2001

http://genesismission.jpl.nasa.gov

GENESIS READINESS FOR LAUNCH

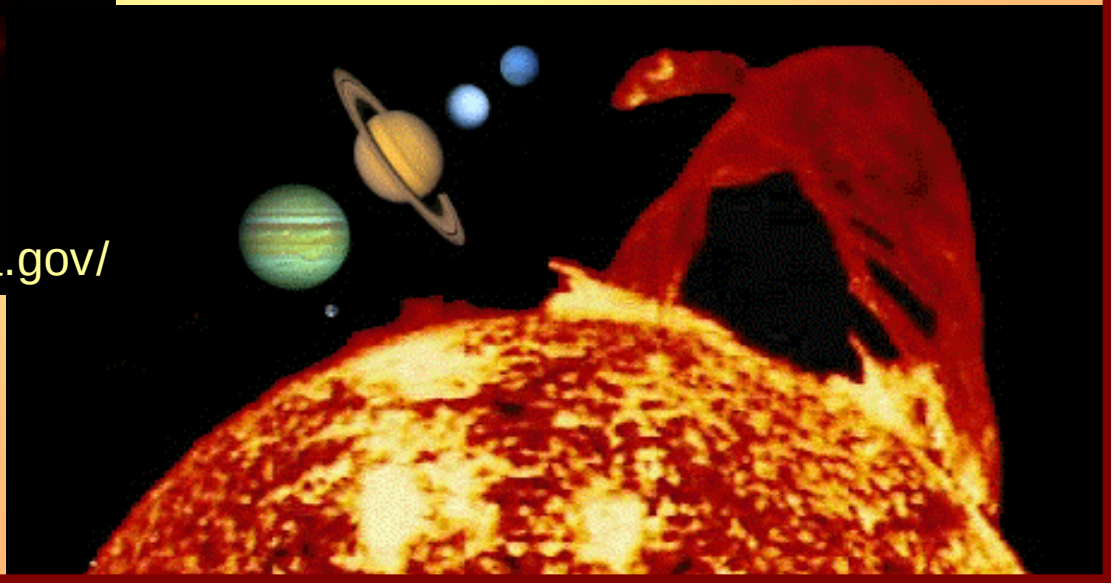
- Spacecraft is in good health and ready for move to the launch pad
- Watch the countdown to launch streaming video from KSC at
  http://genesismission.jpl.nasa.gov/
- Mission operations preparations completed
- One final launch operations rehearsal planned for 7/23/01
- Major reviews SUCCESFULLY held
  - DSN RR on 6/14/2001
  - Flight operations RR on 6/19/01
  - Mission RR on 6/27/01

ulysses

JOINT USERS RESOURCE ALLOCATION PLANNING COMMITTEE

http://ulysses.jpl.nasa.gov/

I. J. Webb
July 19, 2001
NASA Jet Propulsion Laboratory



ULYSSES

JOINT USERS RESOURCE ALLOCATION PLANNING COMMITTEE

- **SPACECRAFT OPERATIONS ARE NORMAL. THE SPACECRAFT IS IN IT'S SECOND ORBIT AROUND THE SUN AND IS CURRENTLY IN NUTATION OPERATIONS. INSTRUMENT CALIBRATIONS AND RECONFIGURATIONS ARE PERFORMED AS REQUIRED.**

- **DOY 172 - DOY 199, SEVEN SOLACE MANEUVERS WERE INITIATED TO CONTROL SPACECRAFT NUTATION. FOUR OF THE MANEUVERS WERE DONE DUE TO PERTURBATIONS IN THE UPLINK AND THREE WERE INITIATED TO CONTROL NORMAL NUTATION.**

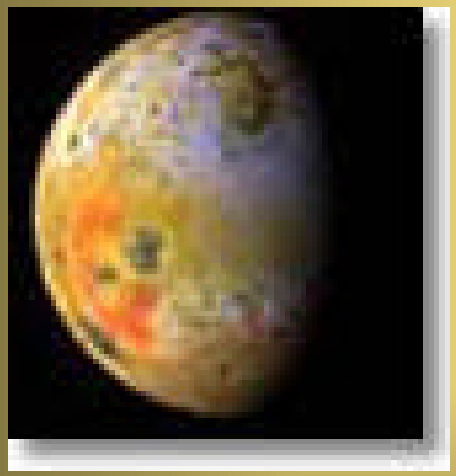
- **DOY 187 / 00:25 - 00:30, DSS 63, COMMAND ABORT, CPA INTERRUPT FAILURE. SWAPPED TO CPA-2 TO MAKE GOOD.**

ULYSSES

JOINT USERS RESOURCE ALLOCATION PLANNING COMMITTEE

- **DOY 122 – DSS 14, CPA WAS REFLECTING OFF STATUS WHEN DRIVE WAS ON. STATION DEMOTED CMA TO IDLE2, THEREBY REMOVING COMMAND MOD SUB-CARRIER, WHICH CAUSED NUTATION TO INCREASE.**
- **DOY 127 – DSS 63, OUR S-BAND TRANSMITTER TRIPPED OFF WHEN STATION PERSONNEL STARTED WARMING UP HIGH POWER TRANSMITTER FOR THE UPCOMING PASS.**
- **DOY 130 – DSS 43, ANTENNA HALT DUE TO BEARING ACCUMULATOR PUMP #2 FAILURE. SWAPPED TO PUMP #1 AND DID A RE-ACQUISITION.**
- **DOY 131 – DSS 63, STATION PERSONNEL NOTED AN OUTPUT POWER OF 0.7KW AND READJUSTED TO 1.0KW, CAUSING RAPID NUTATION GROWTH.**
- **DOY 134 – SPC 60, COMPLEX WIDE POWER FAILURE. STARTED UPLINK WITHIN AN HOUR. THIS FAILURE CAUSED RAPID NUTATION GROWTH (.05 TO .25 DEGREES).**

JOINT USERS RESOURCE ALLOCATION PLANNING COMMITTEE

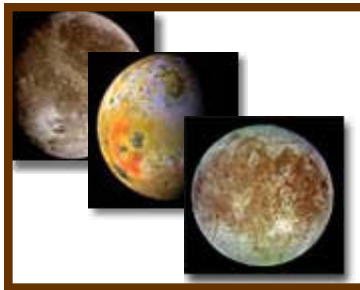


Brad Compton

July 19, 2001

NASA Jet Propulsion Laboratory

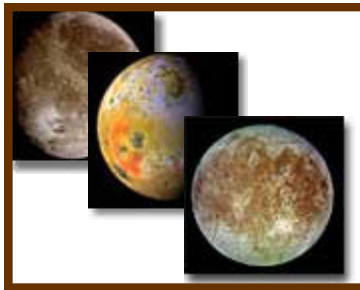
http://galileo.jpl.nasa.gov/



GALILEO EUROPA MISSION

ROUTINE ACTIVITIES

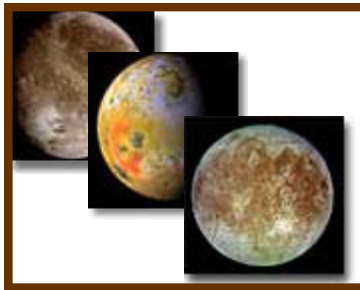
- Attitude maintenance turn
- Two propulsion maintenance activities
- Two DMS conditionings
- Gyro performance test
- Science instrument MROs



GALILEO EUROPA MISSION

SIGNIFICANT EVENTS

- Exit solar conjunction
- Resumed Callisto (C30) encounter data playback
- Executed Near Infrared Mapping Spectrometer (NIMS) calibration
- Performed OTM-97 - apojove maneuver



GALILEO EUROPA MISSION

PROJECT PLANS

- Continue routine activities
- Complete C30 encounter data playback
- Next encounter Io - 6 August
  - First encounter without DSN coverage at closest approach

Joint Users Resource Allocation Planning Meeting

Kathy Moyd

July 19, 2001

JPL

SPECTRUMASTRO

DS1 STATUS

Previous Month's Activities and Current Status

- Regular anchor tracks Earth-pointed and rest of time at "coast" attitude through June 19.
- Because of the significant decrease in use of hydrazine while thrusting, we will be thrusting even during planned "coast" time. The strategy is to alternate between a "North" star and a "South" star.
- Variations in throttle level used to maintain trajectory.
- Earth-Pointed starting June 19 through July 4
- Second encounter rehearsal conducted June 28.
- Returned to "coasting" on July 4.
- Updated ion engine parameters on July 10.
- Started doing ranging on midweek tracks on July 13.
- During midweek track on July 18, discovered that we had lost lock on our tracking star for about 15 hours, although it was locked on a star by the time of the track.

JPL

SPECTRUMASTRO

- Additional track scheduled for July 20 to collect and downlink data that might help determine where the spacecraft is actually pointed.
- Plan to override initial state on Tuesday's anchor track to make it more likely we will be able to lock onto the telemetry.

Telecom-related problems from June 15 through July 15.

- None.

Near Term Plans

- Continue regular anchor tracks/midweeks through September 5.
- Planning to continue ranging through the spacecraft low gain antenna during the 70-meter midweek tracks.

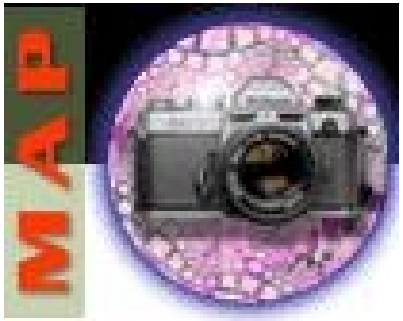
JPL

SPECTRUMASTRO

- Fortuitously, the “South” tracking star is only a few degrees away from Comet Borrelly. On August 25 and 29 we will make observations of Borrelly before turning to Earth. (Additional anchor track scheduled for August 25).
- Starting September 5 we will be Earth-pointed with occasional excursions to Borrelly to make observations.
- Concentrated campaign of observations and TCMs will start September 10.

Long Term Plans

- Comet Borrelly encounter will occur September 22, 2001.
- Time of the encounter is being controlled so as to work around the unavailability of DSS-63. Also taking into account overlap in view periods between DSS-14 and 43 for critical activity.
- “Hyper-extended” mission has been funded for ~ 6 weeks to analyze ion engine state after three years of use.



INTERPLANETARY NETWORK AND INFORMATION SYSTEMS DIRECTORATE

DSN MAP STATUS

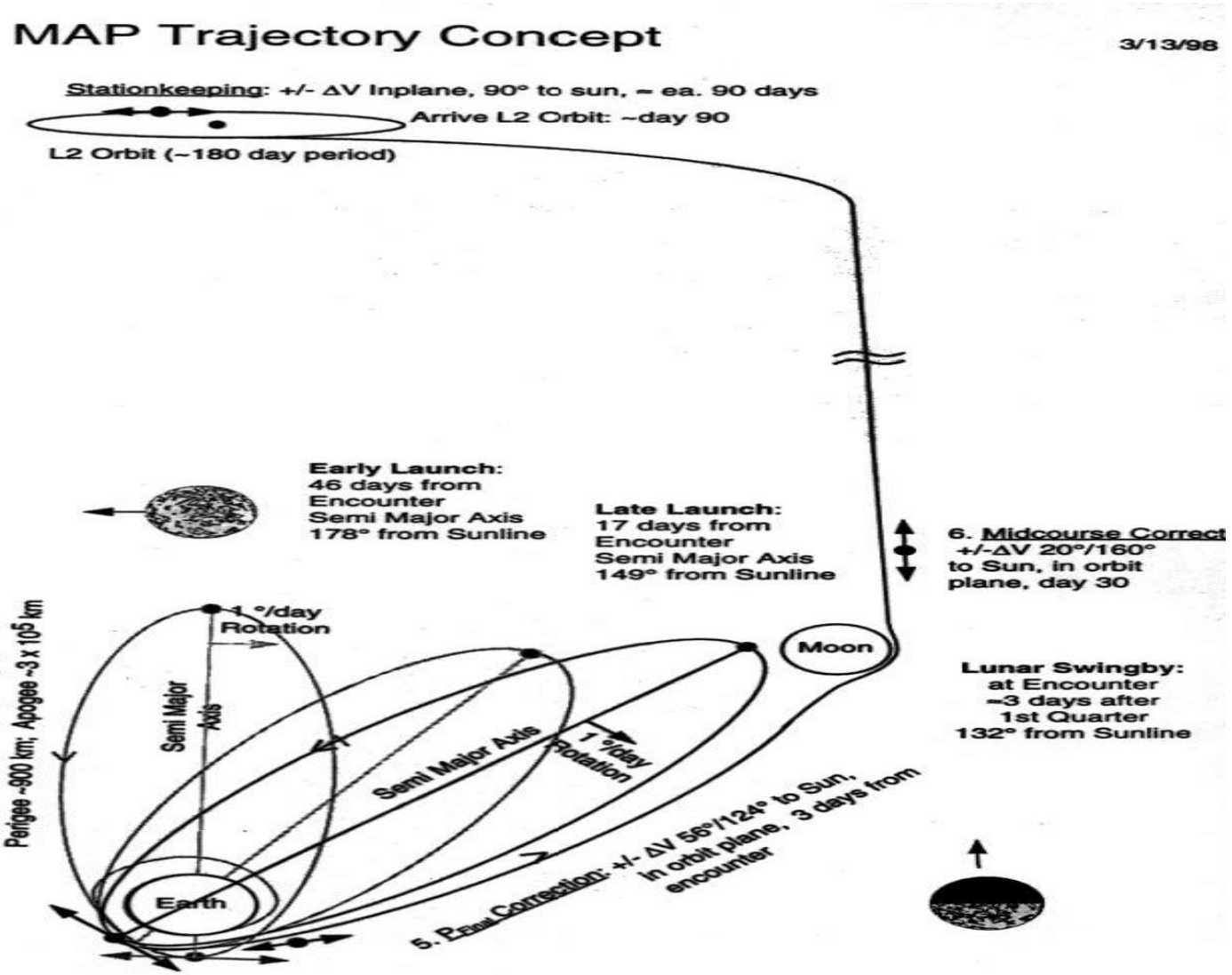
JPL
GSOC

Art Landon

July 19 2001

http://map.gsfc.nasa.gov

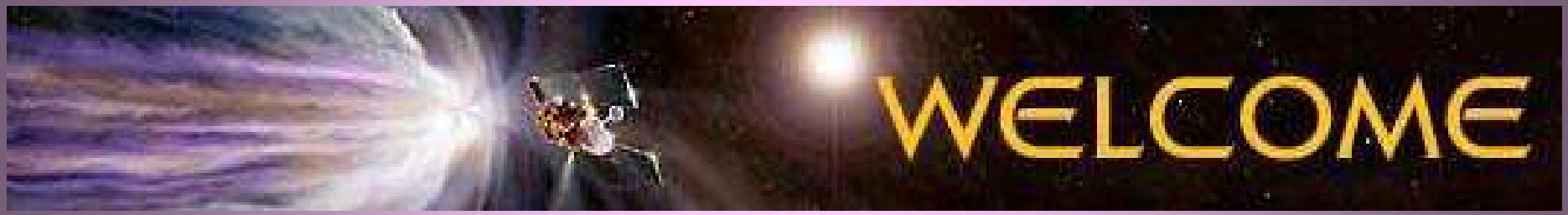
DSN MAP STATUS

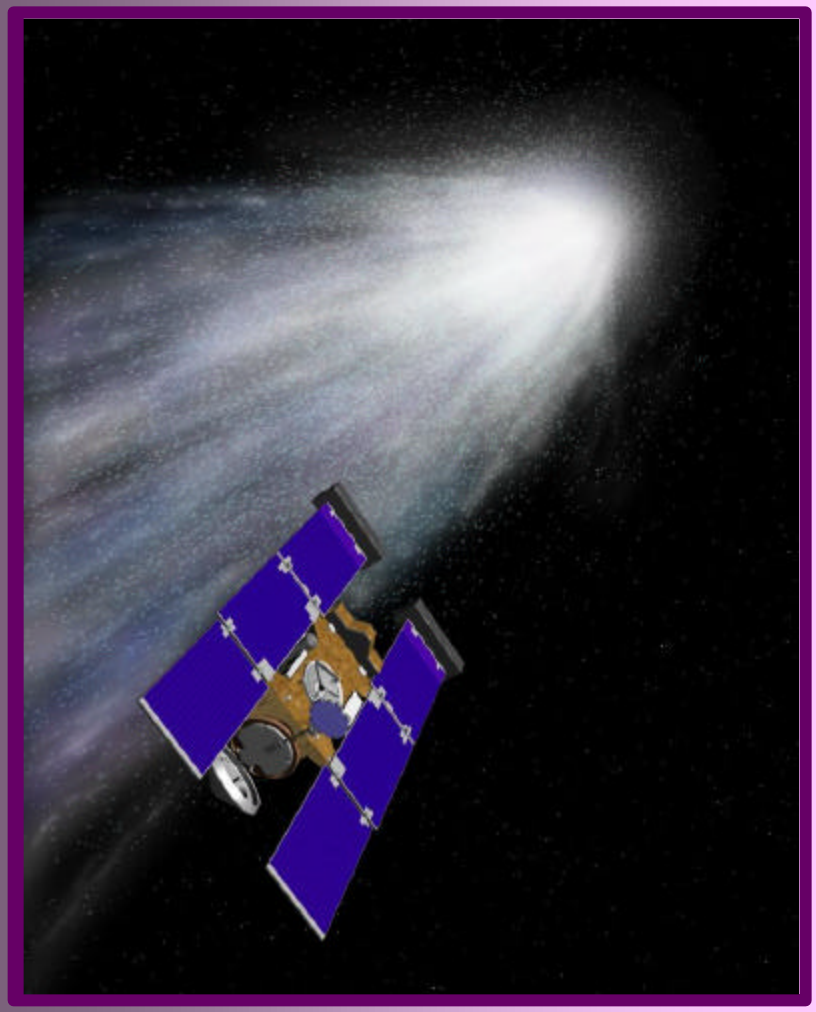


DSN MAP STATUS

MAP Mission Milestones

Activity	**Start UTC**	**Start Local** (PDST)	**End UTC**	**End Local** (PDST)
Launch &S/C Separation	181/19:46	June 30, 5:00 am	182/10:00	July 1, 3:00 am
Apogee Cal Burn A!	185/13:00	July 4, 6:00 am	185/1400	July 4, 7:00 am
Perigee Burn P1	189/02:00	July 7, 7:00 pm	189/07:00	July 8, 12:00 am
Apogee Cal Burn P2	193/14:00	July 12, 7:00 am	193/18:00	July 12, 11:00 am
Perigee Burn P2	198/01:30	July 16, 6:30 pm	198/05:30	July 16, 10:30 pm
Apogee Cal Burn P3	202/17:00	July 21, 10:00 am	202/21:00	July 21, 2:00 pm
Perigee Burn P3	207/07:00	July 26, 12:00 am	207 15:00	July 26, 8:00 am
P Final Correction	208/02:00	July 27, 7:00 pm	208/06:00	July 27, 11:00 pm
Lunar Fly-by	211/20:00	July 30, 1:00 pm	212/0400	July 30, 9:00 pm
MCC (approx. F plus 7)	218/20:00	August 6, 1:00 pm	219/0400	August 6, 9:00 pm





STARDUST

JOINT USERS
RESOURCE ALLOCATION
PLANNING COMMITTEE

R. E. Ryan

July 19, 2001

NASA Jet Propulsion Laboratory

http://stardust.jpl.nasa.gov

STARDUST

Report to JURAP

STATUS

- **SPACECRAFT IS HEALTHY (7/19/01)**
- **PRESENTLY 1.70 AU from EARTH**
- **00:28:20 RTLT**
- **2.0 AU from SUN**

- **SPACECRAFT IS IN NOMINAL CRUISE**
  - **BIT RATE IS AT 504 bps (on HGA), AND WILL CONTINUE TO DROP**
  - **CIDA INTERSTELLAR DUST COLLECTION PERIOD # 2 ON-GOING**
  - **REDUCED NAV CAM ACTIVITY**
    - **GUIDE STAR IMAGES TAKEN JUNE 8 ARE THE BEST TO DATE.**
    - **THIS IS THE BACKGROUND FIELD FOR THE COMET ENCOUNTER**

STARDUST

Report to JURAP

- **CURRENT ACTIVITIES**
  - **ON-GOING EFFORT ON SPACECRAFT FLIGHT SOFTWARE PATCHES**
  - **PLANNING AND TESTING FOR ENCOUNTER**
    - **POSSIBLE USE OF ANNEFRANK (11/02) AS READINESS TEST FOR COMET WILD-2**
  - **REVIEWING EARTH RETURN NAVIGATION PLAN**

- **TMOD SUPPORT HAS BEEN GOOD THIS PAST PERIOD**

http://stardust.jpl.nasa.gov

CHECK OUT THIS HOMEPAGE

UPCOMING EVENTS

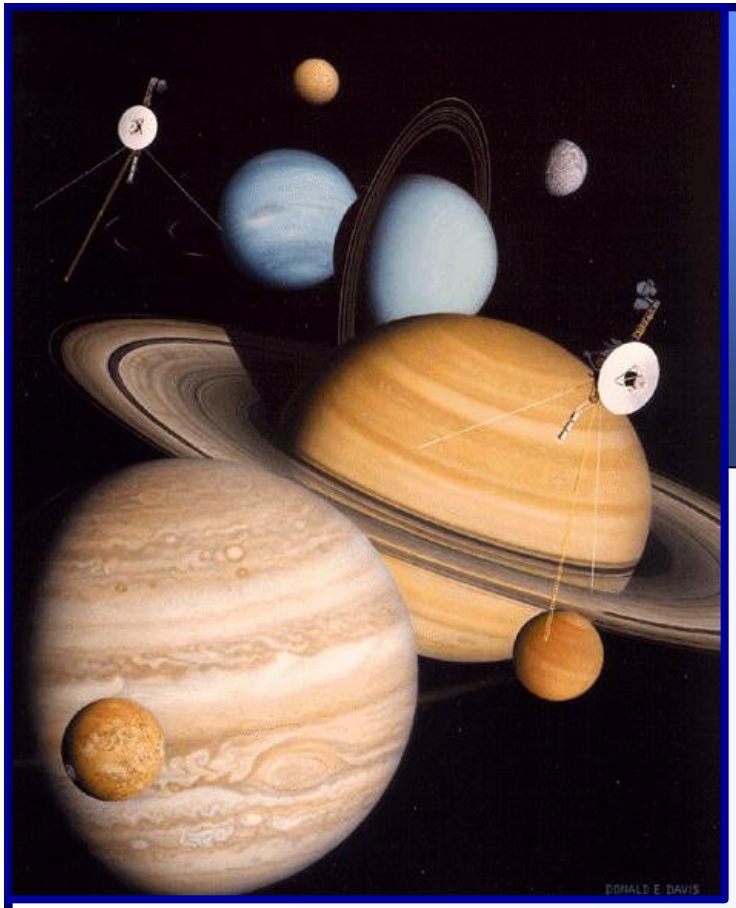
SUPERIOR CONJUNCTION ON DECEMBER 25

Earth 3.5 AU

Sun 2.6 AU

One Degree SEP

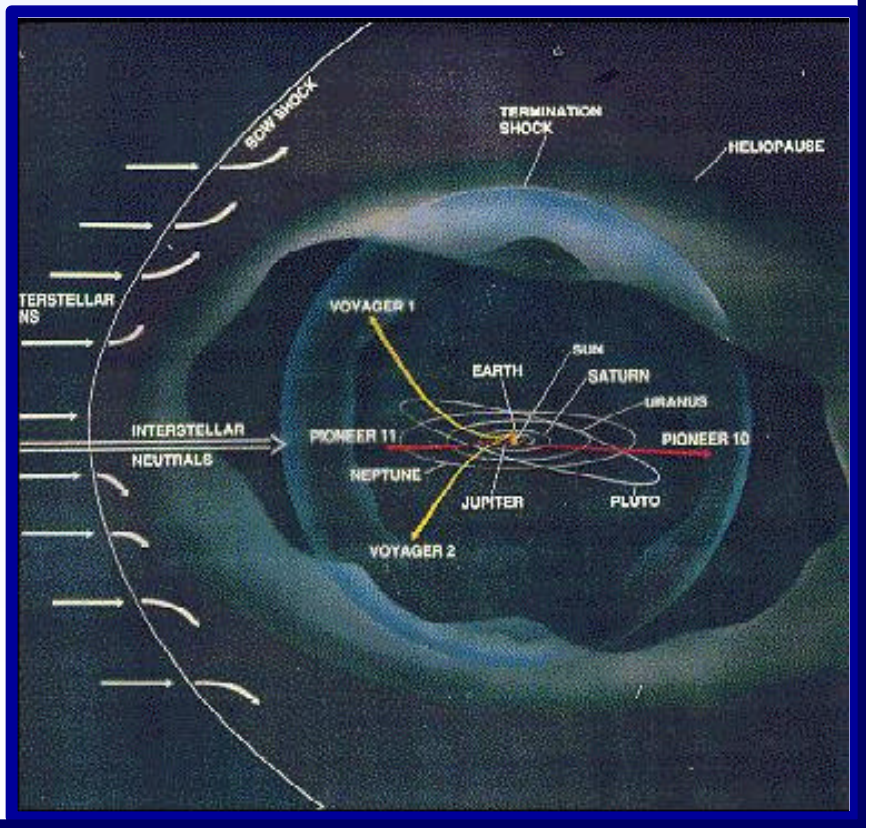
DSM-2 (TCM-7) March 13, 2002



VOYAGER

FLIGHT OPERATIONS

JOINT USERS RESOURCE ALLOCATION PLANNING COMMITTEE

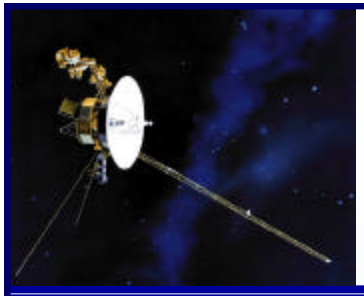


J. C. Hall, Jr.

July 19, 2001

NASA Jet Propulsion Laboratory

http://vraptor.jpl.nasa.gov



VOYAGER

FLIGHT OPERATIONS

JPL

FLIGHT SYSTEM STATUS

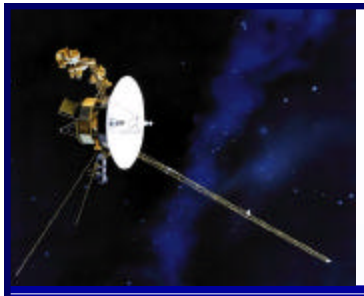
MISSION STATUS

VOYAGER 1

* HELIOCENTRIC DISTANCE – 81.7 AU, RTLT – 22h30m00s
- SPACECRAFT REMAINS HEALTHY

VOYAGER 2

* HELIOCENTRIC DISTANCE – 64.5 AU, RTLT – 17h39m00s
- SPACECRAFT REMAINS HEALTHY



VOYAGER

FLIGHT OPERATIONS

JPL

GROUND SYSTEM STATUS

(June 16, 2001 - July 13, 2001)

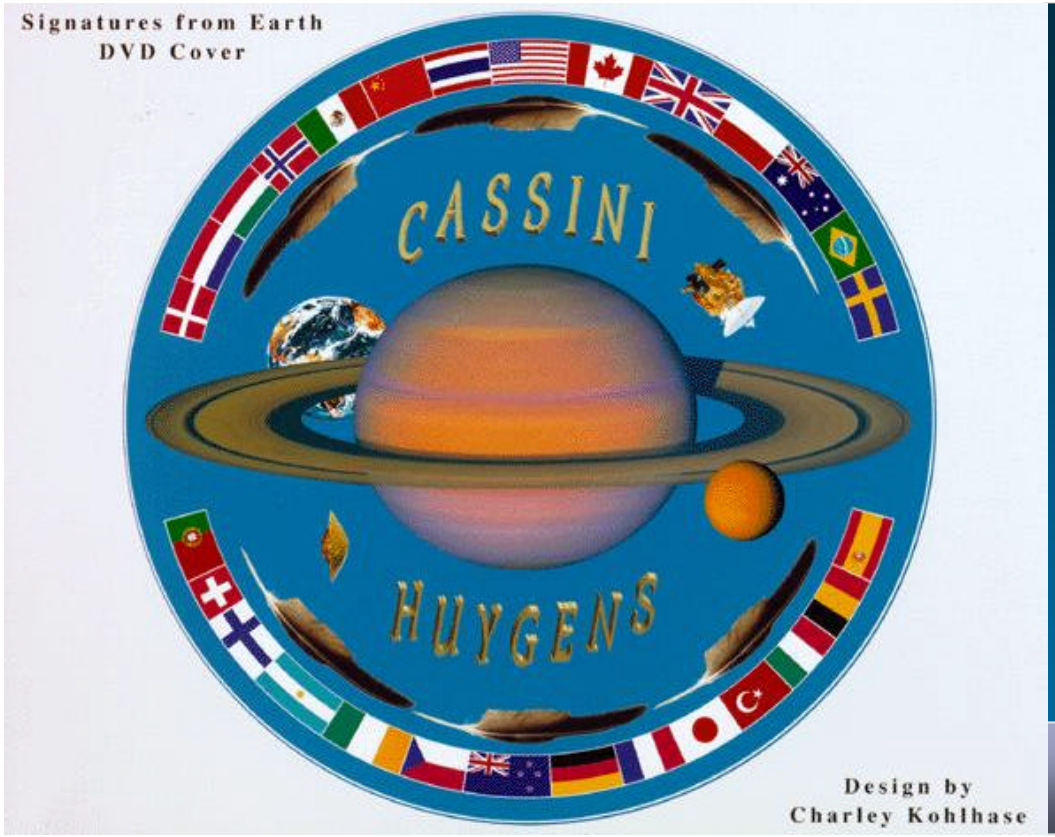
DSN - OVERALL SUPPORT – GOOD

TOTAL SUPPORT TIME, OUTAGE TIME, % of OUTAGE TIME

S/C	SCHED SUPPORT	ACTUAL SUPPORT	70M TIME	SIGNIFICANT OUTAGE TIME	% of OUTAGE TIME
31	291.1	291.1	151.7	3.3 (1.1)	1.5
32	242.2	237.5*	147.3	1.1 (1.2)	.95

***Released 6.1 hours of DSS-45 support to MOI0.**

VOYAGER HOMEPAGE - http://vraptor.jpl.nasa.gov



CASSINI

http://www.jpl.nasa.gov/cassini/

Joint Users Resource Allocation Planning (JURAP) Committee Meeting

Dave Doody

July 19, 2001

NASA Jet Propulsion Laboratory

Cassini Activities

- In Quiet Cruise Subphase through 8 July 2002
  - S/C remains HGA-to-Earth except for specific short activities

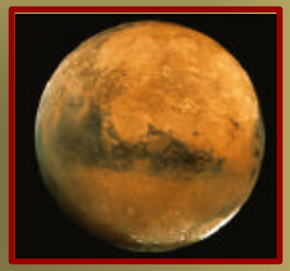
- Operations Basically Nominal
  - Attitude Control has been switched to Thrusters for remainder of Cruise, except for selected periods, to ensure Reaction Wheels' health.
  - Excellent DSN support
    - GDSCC Familiarization Tours in progress
    - Technical Tour Guide now available at GDSCC
  - Minor S/C instrument anomalies being worked and recovered near real time.
    - RSS Ka-Translator-lock anomaly under investigation
  - Cassini's First ISS Images of Saturn acquired DOY 194 and subsequently downlinked
    - RPWS has been "seeing" saturn for some time now

- Gravitational Wave Experiment (GWE) System Test #2 next month
  - First GWE 26 November 2001 through 5 January 2002

Mars Mission Management Office

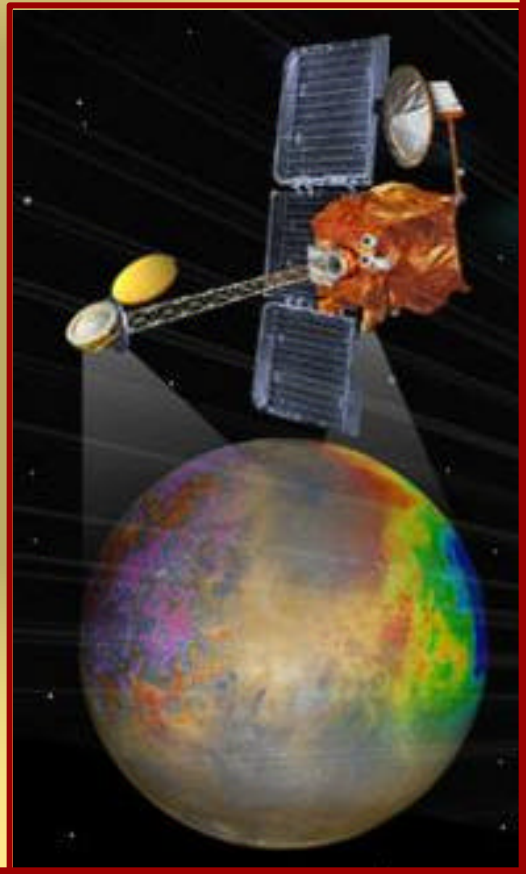
Presentation to the

Joint Users Resource Allocation Planning (JURAP) Meeting

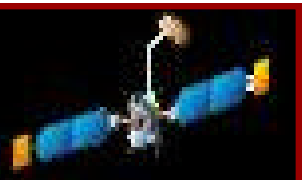


July 19, 2001

E. E. Brower

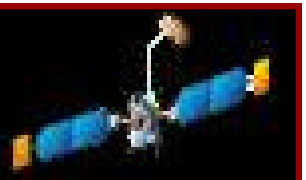


http://mars.jpl.nasa.gov/missions/present/globalsurveyor.html



AGENDA

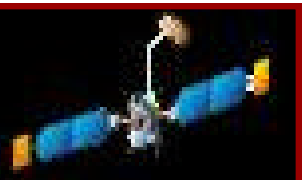
- Color Status
- Recent Events/Accomplishments
- MOLA Anomaly Statement
- Issues



COLOR STATUS

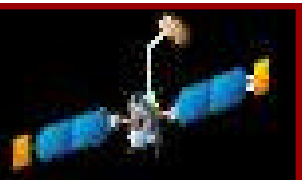
	MAR	APR	MAY
• FLIGHT OPERATIONS			
– SPACECRAFT	G	G	G
– NAVIGATION	G	G	G
– MISSION PLAN/SEQUENCE	G	G	G
• SCIENCE	G	G	Y *
• FLIGHT SUPPORT			
– GROUND DATA SYSTEM	G	G	G

*** Possible MOLA (Mars Orbiter Laser Altimeter) Failure - Troubleshooting underway.**



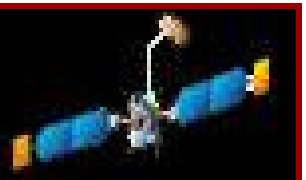
Recent Accomplishments

- Conducted successful UHF relay test and performed Relay16 minimum fuel mode (=>10 gm/d@nadir-16 deg.).
- 145 ROTO Sequences executed by July 1.
- Strategy to support Mars Odyssey aerobraking adopted. Odyssey vs. MER site ROTOs tbd
- ROTO improvements expected by July 23 to increase observations 5X using com orbits and scripted targeting.
- Special observations approved: MOLA polar samples, bistatic radar, delta DOR samples, UHF tests.
- Transition from beta supplement accomplished: 1/mo. vs. 2/wk seq. uplinks
- E2 planning underway: proposal preparation, budget exercise, PQ report preparation, MER MOU negotiation, POP submittals.
- Papers submitted for one-year mapping status report with instrument descriptions to appear in special issue of JGR
- Risk mitigation studies/implementation in progress



Recent Events

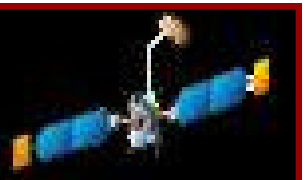
- Last 3 Months:
  - **18 month archive complete** — **APR 30**
  - **Mars Program Office spacecraft resource review** — **MAY 1**
  - **Contingency Mode entrance** — **MAY 2**
  - **RS Egress Occultations** — **MAY 13**
  - **UHF Turn-on (successful)** — **MAY 15**
  - **Baseline Odyssey support plan** — **JUN 12**
  - **Beta supplement end** — **JUN 20**
  - **Microphonics Peer Review** — **JUN 21**
  - **UHF closed loop verification/Relay16 demo (successful)** — **JUN 25-27**
  - **Onset of first major seasonal dust storm** — **JUN 29**
  - **MOLA laser failure** — **JUN 30**
  - **MGS-MER MOU signatures** — **JULY 25**
  - **C-mode Cause Review** — **JULY 17**



Upcoming Events

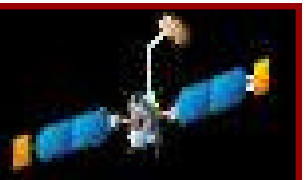
- Next 12 Months:

– ROTO capability during comm. orbits	JULY 23
– PQ Report Submittal to PQ Officer	JULY 30
– E2 Mission proposal submittal	JULY 30
– Bistatic radar observations	AUG 5
– MOLA polar samples?	AUG 10
– Relay16 orientation	TBD
– C-mode Recovery Procedure Review	AUG 15
– Delta DOR for MER	AUG-SEP
– Second year mapping archive complete	OCT 30
– Odyssey A/B support	OCT23 -JAN, 2002
– Beta Supplement	MAR 20
– End of extended mission (E1)	APR 22



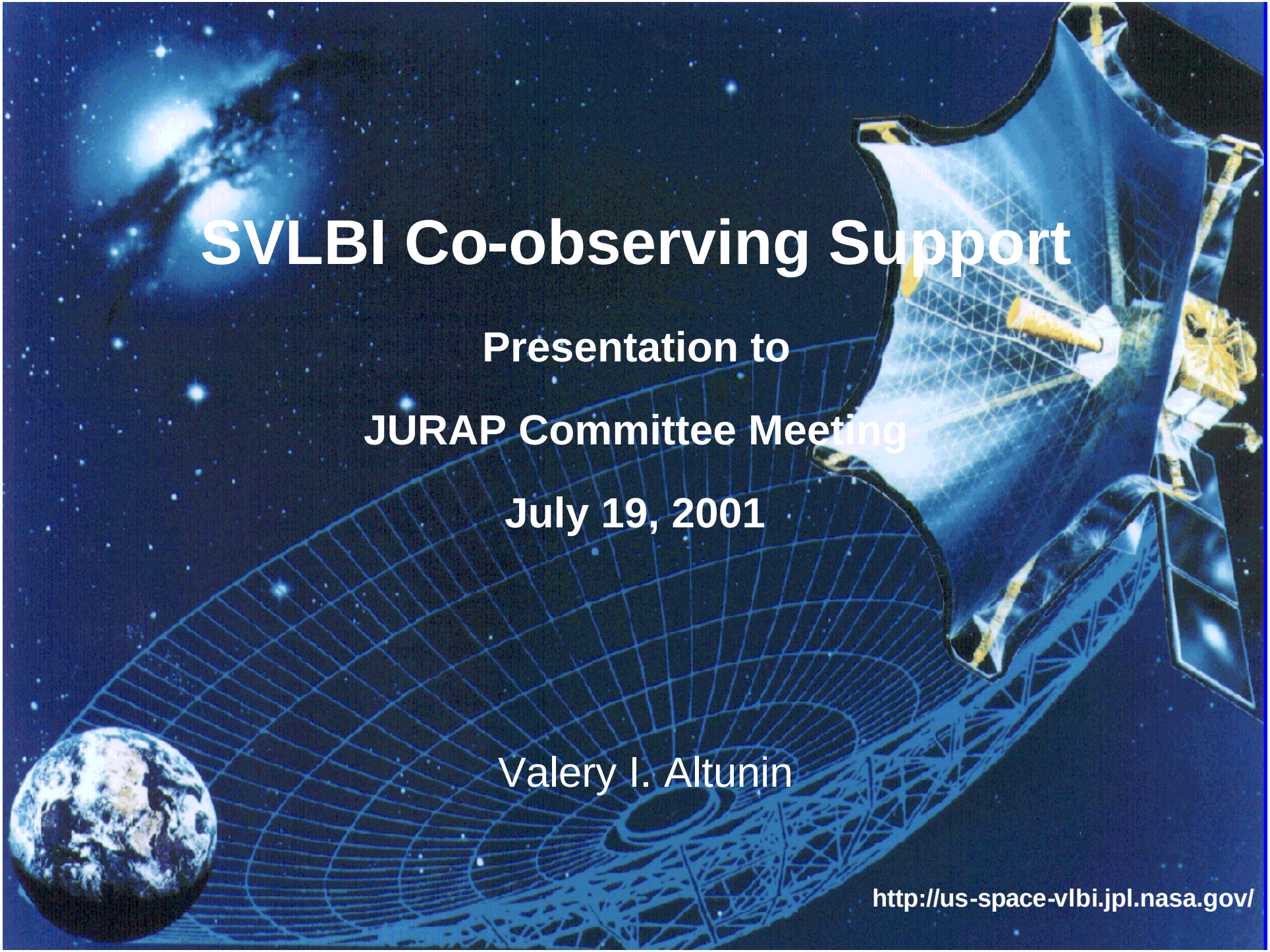
MOLA Status

An MOLA diagnostic test of 64-minute duration was performed just after Noon EDT Saturday, July 14. The instrument successfully returned all housekeeping packets while in maintenance mode but did not return science packets. We will study these data over the next few days but our impression so far is consistent with our opinion that the most likely cause of the MOLA anomaly is associated with the altimetry oscillator or first divider chip in the electronics box. There is no information as to whether the laser fired or was instructed to fire, but analysis of the test results may provide more information.



Issues

- None



SVLBI Co-observing Support

Presentation to

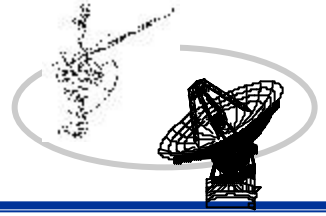
JURAP Committee Meeting

July 19, 2001

Valery I. Altunin

http://us-space-vlbi.jpl.nasa.gov/

SVLBI Co-observing Support



Spacecraft status

- HALCA spacecraft is healthy enough that its operation can be continued through February 2002 (official termination date for the NASA support) and probably further.
- The SVLBI project office informed the DSN that the ISAS prepare the request to extend the mission support for another 1/2 year, until September 2002.
- The 70m DSN subnet supported 16 observing tracks with the VSOP in this year (2-3 tracks per month).
- Approximately ~ 60 % of the VSOP request for co-observing was satisfied
- Average Percent of Data Delivery, PDD (duration of recorded data divided by duration of scheduled track) in the last half year ~ 54%; Unfortunately, the PDD in the second quarter of this year ~ 30% is much lower than in the first quarter ~ 82%